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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,477	07/16/2003	Hideki Okuda	2018-745	7348

23117 7590 10/27/2004

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EXAMINER

BASTIANELLI, JOHN

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,477

Applicant(s)

OKUDA ET AL.

Examiner

John Bastianelli

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/16/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Suggestions

1. In claims 1 and 12, line 11 of the claims, after "axial direction", it appears that the word --and-- should be used to make the claims make sense.
2. In claim 14, line 2 of the claim, after "wherein", "the coil spring" is not referenced in claim 12. It appears that it should be dependant upon claim 13.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12-14, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Nielsen US 4,635,683.

Nielsen discloses a fixed core 28, a cylindrical movable core 22 and 24, a valve member 10 for reciprocating in an axial direction of the movable core in a cooperative manner with the movable core to open and close a fluid path, a coil 26 for forming a magnetic field by electrical conduction thereof to attract the movable core to the fixed core so as to move the movable core in the axial direction; a guide member 38 for guiding the movable core in the axial direction from inside or outside of the movable core in its a coil section radial direction, and a plurality of support members 32, 34, 30, and 36, provided so that rigidity of the movable core in the radial direction is higher than that in the axial direction (this is accomplished by the thickness of the

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spring 32 in the radial direction as opposed to the thinness of spring 32 in the axial direction): for supporting a plurality of portions of the movable core in the axial direction, respectively. One of the support members is either a coil spring 30 that has a decreasing diameter from one end to the other or a flat spring 32.

Allowable Subject Matter

5. Claims 1-11 are allowed.

6. The following is an examiner's statement of reasons for allowance: The primary reason for the allowance of claims 1-11 is the guide wall is elastically deformable and deflects through a space in the radial direction of the guide wall in combination with the device as cited in the rest of claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koga and Tatara disclose an electromagnetic valve with a guide member and a plurality of support members on the movable core with the rigidity being higher in the radial rather than the axial direction. Gilmore, Schechter, and Chumley disclose coil springs with decreasing diameters.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Bastianelli whose telephone number is (703) 305-0058. The examiner can normally be reached on M-F (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (703) 308-2580. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JB

October 21, 2004



John Bastianelli
Primary Examiner
Art Unit 3751